

APPENDIX

The Precision of Sequential Extraction Method

The precision can be expressed as the standard deviation (SD) and the relative standard deviation (RSD). The smaller the value of the relative standard deviation provides the greater precision of an analysis. The standard deviation and the relative standard deviation are defined by equation A1 and A2 respectively [63].

$$SD = \frac{\sqrt{\sum (X_i - \bar{X})^2}}{n-1} \dots\dots\dots (A1)$$

$$\%RSD = \frac{SD}{\bar{X}} \times 100 \dots\dots\dots (A2)$$

where, X_i = individual value of data

\bar{X} = mean of the data

n = number of extractions

In this work, the repeatability of the optimized sequential extraction method was investigated using repeatable extraction for six replicates for all fractions.

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National Conferences:

1. W. Chansuwan, S. Liawruangrath, and P. Sooksamiti, *27th Cong. Sci. Tech.*, Thailand, **2001**.
2. W. Chansuwan, U. Tengjaroenkul, and S. Liawruangrath, *The 1st Annual Symposium on TRF Senior Research Scholar on Flow-Based Analysis*, Chiang Mai University, Thailand, **2002**.
3. W. Chansuwan, U. Tengjaroenkul, and S. Liawruangrath, *28th Cong. Sci. Tech.*, Thailand, **2002**.
4. W. Chansuwan, U. Tengjaroenkul, S. Liawruangrath, and P. Sooksamiti, *PERCH conference II*, Thailand, **2003**.